

# what is your greenequity?




energyeducation  
general knowledge

energyefficiency  
heating and cooling  
water heaters  
lighting  
home electronics

informativeresources:  
websites and phone numbers  
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ENERGYSTAR®  
green retrofitting and cleaning  
recovery act of 2009

## greenghousing initiative

provided by: Town of Davie Housing and Community Development Department



"A green home incorporates smart design, technology, construction and maintenance elements to significantly lessen the negative impact of the home on the environment and improve the health of the people who live inside. No matter your location or living situation, the opportunities for living a greener life at home are limited only by your imagination."

-U.S. Green Building Council

"Energy efficiency is simply the process of doing more with less. The goal is to accomplish the same tasks and functions as before while using less energy."

-Center for Sustainable Energy

## The Green Housing Initiative

“What is your **GreenEquity?**” is a phrase intended to make residents think about the steps they are taking towards ‘Greener’ living. The Green movement spans from eating healthier foods to driving fuel-efficient vehicles. An important step in going green at home is increasing energy efficiency.

Energy efficiency is simply the process of doing more with less. The goal is to accomplish the same tasks and functions as before while using less energy. The Town of Davie promotes environmentally responsible practices aimed at reducing energy consumption while enhancing the quality of life for current and future residents.

The green housing initiative begins with one light bulb, in one room, in one home. With time, education, and awareness, green thinking will expand to more homes, schools, and neighborhoods. In compiling this information, we support the increasing number of residents who are taking action in answering this question: What is your **GreenEquity?**

### Home Energy Usage

(<http://www.eia.doe.gov/kids/energyfacts/uses/residence.html>)

Citizens of the Sunshine State spend less per person on energy than any other state in the country – about 20% less than the national average. However, keeping our homes comfortable uses a lot of energy. Over half of the average home's energy consumption is used for heating and cooling. Another 24 percent is used for lighting and appliances, 17 percent for heating water, and 5 percent for refrigeration.

Most homes still use the traditional incandescent bulbs. These bulbs convert only about ten percent of the electricity they use to produce light; the other 90 percent is converted into heat. With new technologies, such as better filament designs and gas mixtures, incandescent bulbs are more efficient than they used to be.

Compact fluorescent light bulbs, or "CFLs", have made inroads into home lighting systems in the last few years. These bulbs are more expensive to purchase, but last much longer and use much less energy, producing significant savings over the life of the bulb.

Appliances such as water heaters, refrigerators, washing machines and dryers are also more energy efficient than they used to be. In 1990 Congress passed the National Appliance Energy Conservation Act, which requires new appliances to meet strict energy efficiency standards.

Natural gas is the most widely used energy source in American homes, followed by electricity, heating oil and propane. Natural gas and heating oil (fuel oil) are used mainly for home heating. Electricity may also be used for heating and cooling, plus it lights our homes and runs almost all of our appliances.

*(Due to climate, Florida residents rely heavily on electricity for air conditioning like other state's residents rely heavily on natural gas for heating.) According to the 2000 census, 8.7*

*percent of Florida home heating is with electricity (ranks first among the states). In 2005 the Environmental Information Administration (EIA) data ranked Florida fourth among the states in per capita consumption of electricity in homes.*

## Home Energy Audits

(from ENERGYSTAR

[http://www.energystar.gov/index.cfm?c=home\\_improvement.hm\\_improvement\\_audits](http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_audits))

A home energy audit is often the first step in making your home more efficient. An audit can help you assess how much energy your home uses and evaluate what measures you can take to improve efficiency. But remember, audits alone don't save energy. You need to implement the recommended improvements. ENERGY STAR provides extensive information about home improvement projects to enhance energy efficiency, lower utility bills, and increase comfort. Your first step should be to contact your utility to see if they offer free or discounted energy audits to their customers. If not, you can perform a simple energy audit yourself, or have a professional energy auditor perform a more thorough audit.

### Do-It-Yourself Audits

If you have five minutes and your last 12 months of utility bills, use the ENERGY STAR Home Energy Yardstick to compare your home's energy efficiency to similar homes across the country and get recommendations for energy-saving home improvements from ENERGY STAR. You will also need to enter some basic information about your home (such as zip code, age, square footage, and number of occupants). If you don't have your bills, contact your utility for a 12-month summary.

### Hire a Professional Home Energy Auditor

If you are interested in getting specific recommendations for improving the efficiency of your home, consider contacting a professional Home Energy Auditor. A professional auditor can use a variety of techniques and equipment to determine the energy efficiency of your home. Thorough audits often use equipment such as blower doors, which measure the extent of leaks in the building envelope, and infrared cameras, which reveal hard-to-detect areas of air infiltration and missing insulation.

### Free Home Energy Audit

Contact Florida Power and Light and schedule a **free** Home Energy Audit

Call today:  
1800.342.5375

or for more information visit:

[http://www.fpl.com/  
residential/electric/highbill.shtml](http://www.fpl.com/residential/electric/highbill.shtml)

what is your  
greenequity?

Part I: Energy Education

**Over half of the average home's energy consumption is used for heating and cooling. Another 24 percent is used for lighting and appliances, 17 percent for heating water, and 5 percent for refrigeration.**

## Heat & Cool Efficiently

([http://www.energystar.gov/index.cfm?c=heat\\_cool.pr\\_hvac](http://www.energystar.gov/index.cfm?c=heat_cool.pr_hvac))

As much as half of the energy used in your home goes to heating and cooling. So making smart decisions about your home's heating, ventilating, and air conditioning (HVAC) system can have a big effect on your utility bills — and your comfort. Take these steps to increase the efficiency of your heating and cooling system.

### Change your air filter regularly

Check your filter every month, especially during heavy use months (winter and summer). If the filter looks dirty after a month, change it. At a minimum, change the filter every 3 months. A dirty filter will slow down air flow and make the system work harder to keep you warm or cool — wasting energy. A clean filter will also prevent dust and dirt from building up in the system — leading to expensive maintenance and/or early system failure.

### Tune up your HVAC equipment yearly

Just as a tune-up for your car can improve your gas mileage, a yearly tune-up of your heating and cooling system can improve efficiency and comfort.

### Install a programmable thermostat

A programmable thermostat is ideal for people who are away from home during set periods of time throughout the week. Through proper use of pre-programmed settings, a programmable thermostat can save you about \$180 every year in energy costs.

### Seal your heating and cooling ducts

Ducts that move air to-and-from a forced air furnace, central air conditioner, or heat pump are often big energy wasters. Sealing and insulating ducts can improve the efficiency of your heating and cooling system by as much as 20 percent — and sometimes much more.

### Ask about Proper Installation of your new equipment

Replacing your old heating and cooling equipment with new, energy-efficient models is a great start. But to make sure that you get the best performance, the new equipment must be properly installed. In fact, improper installation can reduce system efficiency by up to 30 percent — costing you more on your utility bills and possibly shortening the equipment's life.

*Energystar Guide to Energy Efficient Heating and Cooling*

([http://www.energystar.gov/ia/products/heat\\_cool/GUIDE\\_2COLOR.pdf](http://www.energystar.gov/ia/products/heat_cool/GUIDE_2COLOR.pdf))

## Water Heaters

([http://www.energystar.gov/index.cfm?c=water\\_heat.pr\\_water\\_heaters](http://www.energystar.gov/index.cfm?c=water_heat.pr_water_heaters))

From warm showers to clean dishes, we count on hot water. In fact, the average household spends \$400–\$600 per year on water heating — making it the second largest energy expenditure behind heating and cooling.

### Get your energy bills out of hot water.

Most Americans have conventional water heaters that are barely more efficient than ones sold 20 years ago. Today's new

ENERGY STAR qualified water heaters include smart design enhancements that offer significant improvements in efficiency — and performance. Depending on the technology you choose, you can cut your water heating costs in half!

### **Don't get burned, plan ahead.**

A water heater lasts about 10–15 years, and when it fails it can leave you with a big mess. When in a rush to replace, it's hard to evaluate options and consumers often end up with the least efficient choice. If you're one of the 27 million households with a water heater that's more than ten years old, consider replacing it with an ENERGY STAR qualified model before it fails. By acting early you have more control of your purchase and can start saving money right away.

## **Lighting Products**

([http://www.energystar.gov/index.cfm?c=lighting.pr\\_lighting](http://www.energystar.gov/index.cfm?c=lighting.pr_lighting))

In the average U.S. home, lighting accounts for about 20% of the electric bill. Americans can save money and protect the environment by installing ENERGY STAR qualified lighting.

The easiest way to start saving energy is to change out the light bulbs in your current fixtures. If you are remodeling, building a new home, or just updating the look of a room, consider installing new ENERGY STAR qualified light fixtures.

To save the most energy and money, replace your highest use bulbs and

fixtures with ENERGY STAR lighting. Focus on the kitchen ceiling lights, the living or family room table and floor lamps, and outdoor porch or post lamp.

## **Home Electronics**

([http://www.energystar.gov/index.cfm?fuseaction=find\\_a\\_product.showProductCategory&pcw\\_code=HEF](http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductCategory&pcw_code=HEF))

Residential electricity use by consumer electronic products is responsible for approximately 15% of household electricity use.

### **Save Energy, Save Money**

Home electronic products use energy when they're off to power features like clock displays and remote controls. U.S. households spend \$100 per year to power devices while they are in this "standby" power mode. Products that have earned the ENERGY STAR use less energy to perform these functions, while providing the same performance and features as conventional models. Using less energy preserves energy resources and helps reduce the risks of global warming while saving money on energy bills.

### **Help Protect the Environment**

Simple actions can make a big difference. The average home has two TVs, three telephones, and a DVD player. If these items were replaced with ENERGY STAR qualified models, it would save over 25 billion pounds of greenhouse gas emissions, equivalent to that of more than 2 million cars.





## Quick Resources

### **United States Department of Energy (DOE)**

<http://www.energy.gov/energyefficiency/index.htm>

The Department of Energy is committed to reducing America's dependence on foreign oil and developing energy efficient technologies for buildings, homes, transportation, power systems and industry.

### **DOE – Make Everyday Earth Day**

Energy Tips

(<http://www.energy.gov/energytips.htm>)

### **United States Office of Energy Efficiency and Renewable Energy (EERE)**

#### **Energy Savers**

<http://www.energysavers.gov/>

The mission of the Office of Energy Efficiency and Renewable Energy (EERE) is to strengthen America's energy security, environmental quality, and economic vitality in public-private partnerships that: enhance energy efficiency and productivity; bring clean, reliable and affordable energy technologies to the marketplace; and make a difference in the everyday lives of Americans by enhancing their energy choices and their quality of life.

### **United States Green Building Council**

<http://www.greenhomeguide.org/index.html>

From Seattle to Des Moines to New York City, anyone can have a green home. Rented or owned, affordable or market-rate, single-family or multi-unit, urban, suburban or rural: If it's housing, it can be green.

### **ENERGY STAR®**

<http://www.energystar.gov>

Energy Star is a government-backed program helping businesses and individuals protect the environment through superior energy efficiency.

### **Florida Power and Light**

#### **Home Energy Audit**

<http://www.fpl.com/residential/electric/highbill.shtml>  
1800.342.5375

### **Broward County – Go Green**

<http://www.broward.org/gogreen/>

The County has implemented a variety of actions in an effort to reduce energy consumption and move toward reducing greenhouse gas emissions, thereby reducing the County's carbon footprint. This Web site details many of those actions, and also offers tips on what residents and businesses can do to "go green."

### **Broward County Waste and Recycling Services**

<http://www.broward.org/waste/>  
954.765.4999

Waste and Recycling Services (WRS) offers a comprehensive waste management and recycling system for the residents of Broward County.

### **Broward County Recycling and Contract Administration Division**

<http://www.broward.org/recycling/>

The Recycling and Contract Administration Division (RCAD) oversees recycling programs for Broward County and Interlocal Agreement (ILA) cities, Broward County Public Schools, and County government agencies. RCAD also manages a household hazardous waste (HHW) program, as well as garbage, bulky waste, and recycling services for unincorporated areas of the county.

### **Town of Davie**

#### **Recycling Program**

([http://www.davie-fl.gov/Pages/DavieFL\\_Programms/garbage/index](http://www.davie-fl.gov/Pages/DavieFL_Programms/garbage/index))  
954.797.1042

## Five Projects Under \$50

([http://www.greenhomeguide.org/features/15\\_inexpensive\\_green\\_projects.html](http://www.greenhomeguide.org/features/15_inexpensive_green_projects.html))

### **Install aerators on faucets.**

These screw-on mesh screens break up water droplets, so you use less water but get just as much rinsing power.

### **Clean your refrigerator coils.**

If they're coated with dust, refrigerator coils can't transfer heat efficiently, so it takes more energy to cool your food. Get at them (they're usually found underneath or at the back) with a long-handled brush.

### **Replace weatherstripping.**

Over time, the seals around windows and doors wear out, letting in chill winter air and prompting you to crank up the thermostat.

### **Reduce light pollution.**

Put a motion sensor on your all-night garage floodlight. Not only will you save electricity; you and your kids will get to enjoy one of early fall's greatest pleasures: a clear view of the night sky.

### **Clean green.**

You don't need dozens of toxic products. Soap, baking soda and vinegar or lemon juice can take care of most household cleaning needs.

### **Free Bonus Project**

Contact Florida Power and Light and schedule a **free** Home Energy Audit

Call today:  
1800.342.5375

or for more information visit:  
[http://www.fpl.com/  
residential/electric/highbill.shtml](http://www.fpl.com/residential/electric/highbill.shtml)

what is your  
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Part III: Informative**Resources**



## Common Home Problems and Solutions

[http://www.energystar.gov/index.cfm?c=home\\_improvement.hm\\_improvement\\_solutions](http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_solutions)

Is your home cold, drafty, or uncomfortable? Do you have high energy bills? Peeling paint? Excessive dust? Addressing these types of home problems can make your home more comfortable, and at the same time improve its energy efficiency — saving you money on utility bills and helping to protect the environment too.

### High Energy Bills

High utility bills in summer and winter can often be traced to air leaks in your home's envelope, inefficient windows or inefficient or incorrectly installed heating and cooling equipment, or poorly sealed and insulated ducts.

### Mold, Mildew or Musty Odors

Water leaks or high humidity can lead to mold and mildew. This can cause wood rot, structural damage, peeling paint, and a variety of health problems. Often, high humidity in homes with central air conditioners can be traced to improperly sized or installed air conditioners.

### Damp Basement

A damp basement is commonly caused by moisture migrating through the foundation. As this moisture evaporates, it increases indoor humidity and can promote the growth of mold — resulting in an uncomfortable house.

### Cold Floors in Winter

Some types of floor coverings (such as wood, stone, tile, or concrete) will naturally feel cold on bare feet. However, insufficient insulation or air infiltration can also cause cold floors.

### Drafty Rooms

Cold air coming into or going out of your house, especially through leaks hidden in the attic and basement, can cause rooms to feel drafty and uncomfortable.

### Dust

Increased dust could be a sign that it is time to change your air filter or that your ductwork is not well sealed.

### Moisture on Windows

Inefficient windows or high indoor moisture levels from air leaks can result in condensation, frost, or pools of water on windows and sills.

### Peeling Paint

Peeling or cracking paint on your home's exterior may be a sign of a humidity problem or improper paint application.

### Hot or Cold Rooms

Significant differences in temperature from one room to another could be caused by several factors, including inadequate insulation, air leakage, poor duct performance, and improperly installed heating, ventilation, and air conditioning (HVAC) system.

### Dry Indoor Air in Winter

Air leaks in your home allow warm humid air to escape and draw in drier colder air.



## What is ENERGYSTAR?

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.

In 1992 the US Environmental Protection Agency (EPA) introduced ENERGY STAR as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. Computers and monitors were the first labeled products. Through 1995, EPA expanded the label to additional office equipment products and residential heating and cooling equipment. In 1996, EPA partnered with the US Department of Energy for particular product categories. The ENERGY STAR label is now on major appliances, office equipment, lighting, home electronics, and more. EPA has also extended the label to cover new homes and commercial and industrial buildings.

Through its partnerships with more than 15,000 private and public sector organizations, ENERGY STAR delivers the technical information and tools that organizations and consumers need to choose energy-efficient solutions and best management practices. ENERGY STAR has successfully delivered energy and cost savings across the country, saving businesses, organizations, and consumers about \$19 billion in 2008 alone. Over the past decade, ENERGY STAR has been a driving force behind the more widespread use of such technological innovations as efficient fluorescent lighting, power management systems for office equipment, and low standby energy use.

Energy prices have become a hot news topic and a major concern for consumers. ENERGY STAR provides solutions. ENERGY STAR provides a trustworthy label on over 60 product categories (and thousands of models) for the home and office. These products deliver the same or better performance as comparable models while using less energy and saving money. ENERGY STAR also provides easy-to-use home and building assessment tools so that homeowners and building managers can start down the path to greater efficiency and cost savings.



# Green Retrofit Checklist

([http://www.greenhomeguide.org/guide\\_for\\_green\\_renovation/green\\_retrofit\\_checklist.html](http://www.greenhomeguide.org/guide_for_green_renovation/green_retrofit_checklist.html))

## Switch to compact fluorescent light bulbs

Compact Fluorescent Light bulbs (CFLs) can be a huge energy saver and typically have a much longer life than other bulbs. Replace some (or all) of your incandescent bulbs with fluorescents and enjoy reductions in heat production, energy use and electric bills. Changing five of the most frequently used bulbs in your home can save you \$100 per year on electric bills.

## Program your thermostat

When you are at home, keep the thermostat at 78 F or higher in the summer and 62 F or lower in the winter. Programmable thermostats allow you to program the systems to reduce output when they are not needed, like when no one is home during the day or at night when everyone is sleeping.

## Plug air leaks

This simple step can go a long way toward keeping your home at the temperature you desire, saving money on heating and air conditioning bills and more. Common leaks occur around windows, doors and other wall penetrations. Plugging those leaks with weather stripping and caulk can be a simple task for anyone.

## Choose ENERGY STAR® appliances

ENERGY STAR®-qualified products meet a high level of energy efficiency, which can translate into savings on electric bills. So when it's time to replace that old refrigerator, microwave, clothes washer or other appliance, remember that even if an ENERGY STAR appliance costs more, you could reduce your energy bill by \$50 yearly for each appliance. Also, check with your electric utility – some offer incentives for replacing old appliances with more efficient ones.

## Reduce water use

Inside, install aerators – available for a few dollars at your local home supply store – to your sink faucets and change to low-flow showerheads. Outside, landscape with native plants and minimize high-maintenance landscaping such as turf grass.

## Plant trees to provide shade and wind protection for your house

This simple step can help you save money on heating and air conditioning bills while providing beautiful views around your home.

## Use native plantings

Native plants have been growing and evolving in your area for thousands of years and, as a result, have adapted to the local soils and climate. As a result they are more likely to thrive with minimal care, unlike exotic plants. That can mean less need for water, fertilizer and pesticides. The Environmental Protection Agency has additional information on green landscaping techniques.



## Top Green Cleaning Tips

(<http://planetgreen.discovery.com/green/green-cleaning/green-cleaning-top-tips.html>)

### Employ green cleaning products

As the health and environmental impacts of conventional cleaning products become more thoroughly understood, more and more brands of healthy, green, and effective cleaning products have started hitting the market and competing for that coveted place of honor under your sink. Many of these products are non-toxic, biodegradable, and made from renewable resources (not petroleum). But if designer labels aren't for you, home-mixed cleaners can get the job done and then some. Vinegar and baking soda can be used to clean almost anything. Mix in a little warm water with either of these and you've got yourself an all-purpose cleaner.

### Avoid poor indoor air quality

It is not uncommon for the air inside a home or office to be more toxic than the air outside. This is because of the presence of toxic materials and substances and the fact that homes and buildings are better insulated than ever before (which is a good thing from an energy standpoint). Keeping windows open as often as possible allows fresh air in and keeps toxins flowing out. This is especially important when cleaning your home.

### Be careful with antibacterial cleaners

The antibacterial and antimicrobial 'cleaners' that many people think are necessary, especially during cold season, don't clean hands better than soap and water, and also add to the risk of breeding "super germs," bacteria that survive the chemical onslaught and have resistant offspring. The FDA has found that antibacterial soaps and hand cleansers do not

work better than regular soap and water, and should be avoided.

### Help your home smell baking soda-licious

Baking soda not only removes those strange smells coming from your fridge, it's also a great odor-eliminator for your carpet. Just sprinkle on a little baking soda to soak up some of those odors and then vacuum it up.

### Clean your indoor air naturally

Skip the store-bought air fresheners and instead try boiling cinnamon, cloves, or any other herbs you have a fondness for. Fresh chocolate chip cookies also have been known to create a friendly aroma. Also, plants may not make your house smell different but are good for filtering interior air--pretty much any broad green leaf plant will do. Peace Lilies are a favorite choice.

### Toss toxic cleaners carefully

When replacing your cleaning products, don't just throw the old ones in the trash. If they're too toxic for your home, they won't be good for the drain or the landfill either. Many communities hold toxics & electronics recycling days and will take all of these off your hands.

### Leave the toxins at the door

Imagine what's on your shoes at the end of the day. Bringing that oil, antifreeze, animal waste, particulate pollution, pollen, and who knows what else into the house is not good news, especially for kids and other critters that spend time on floor level. Keep the sidewalk out of your home with a good doormat or a shoeless house policy. Many green buildings now include entryway track-off systems as a means of maintaining a healthy interior environment. Less dirt also means less sweeping, mopping, and vacuuming, which means less work, water, energy, and fewer chemicals.

## Recovery Act of 2009

(<http://www.energy.gov/recovery/>)

### Overview of the American Recovery and Reinvestment Act of 2009 (Recovery Act)

The American Recovery and Reinvestment Act of 2009 (Recovery Act) was signed into law by President Obama on February 17th, 2009. It is an unprecedented effort to jumpstart our economy, create or save millions of jobs, and put a down payment on addressing long-neglected challenges so our country can thrive in the 21st century.

The Act is an extraordinary response to a crisis unlike any since the Great Depression, and includes measures to modernize our nation's infrastructure, enhance energy independence, expand educational opportunities, preserve and improve affordable health care, provide tax relief, and protect those in greatest need.

Toll-free number for the DOE Recovery Act Clearinghouse: 1-888-DOE-RCVY (1-888-363-7289). The Recovery Act Clearinghouse provides information on popular topics, frequently asked questions and the ability to send us your questions via the web any time. The Recovery Act Clearinghouse toll free line is available Monday through Friday, 9 a.m. to 7 p.m. Eastern Standard Time.

